

AMENDMENTS TO THE CLAIMS:

1. (Withdrawn) A body composition estimation method comprising calculating a parameter of a bioelectrical impedance in a body part to be measured, from a parameter value of an electric current to be applied to a living body and a parameter value of a measured voltage, wherein by use of a parameter representing an intracellular/extracellular fluid ratio which is included in a parameter value of a bioelectrical impedance measured at a given frequency, the parameter value of the measured bioelectrical impedance is corrected and a body composition is estimated based on the corrected parameter value.

2. (Withdrawn) The method of claim 1, wherein the given frequency is the frequency of the electric current applied to the living body for estimation of the body composition.

3. (Withdrawn) The method of claim 1, wherein the given frequency is a frequency different from the frequency of the electric current applied to the living body for estimation of the body composition.

4. (Withdrawn) The method of claim 1, wherein the parameter to be corrected of the bioelectrical impedance is any of the absolute value of the bioelectrical impedance, a bioelectrical impedance vector value or the resistance component value of the bioelectrical impedance vector.

5. (Withdrawn) The method of claim 2, wherein when the parameter associated with the bioelectrical impedance which is corrected by the parameter associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is P' , P' is calculated in accordance with the following correction expression:

$$P' = f(P, \alpha) = K \cdot P^A \cdot \alpha^B + C$$

wherein $f(P, \alpha)$ is a correction function represented by parameters P and α , P' is the corrected parameter associated with the bioelectrical impedance, P is the measured parameter associated with the bioelectrical impedance, α is the parameter associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio, and A , B , C and K are constants.

6. (Withdrawn) The method of claim 5, wherein the parameter α associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is expressed as follows by use of a phase difference ϕ between the waveform of the alternating current applied to the living body and the waveform of the measured voltage at the time of measurement of the bioelectrical impedance.

$$\alpha = 1/\phi$$

7. (Withdrawn) The method of claim 5, wherein the parameter α associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is expressed as follows by use of a phase difference ϕ between the waveform of the alternating current applied to the living body and the waveform of the measured voltage at the time of measurement of the bioelectrical impedance.

$$\alpha = 1/\tan(\phi)$$

8. (Withdrawn) The method of claim 5, wherein the parameter α associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is expressed as follows by use of a parameter included in the parameter associated with the bioelectrical impedance to be corrected or a parameter associated with a bioelectrical impedance which is measured at other frequency.

$$\alpha = R/X$$

wherein R is the resistance component of the bioelectrical impedance, and X is the reactance component of the bioelectrical impedance.

9. (Withdrawn) The method of claim 5, wherein the parameter α associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is expressed as follows by use of the absolute value of the bioelectrical impedance or the resistance component value of the bioelectrical impedance which is a parameter associated with a bioelectrical impedance at higher and lower frequencies than a measuring frequency for the parameter associated with the bioelectrical impedance to be corrected or either one of which is the parameter associated with the bioelectrical impedance to be corrected.

$$\alpha = P_{\text{high}}/P_{\text{low}}$$

wherein P_{high} is a parameter associated with a bioelectrical impedance at a higher frequency, and P_{low} is a parameter associated with a bioelectrical impedance at a lower frequency.

10. (Withdrawn) The method of claim 5, wherein the parameter α associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is expressed as follows by use of the absolute value of the bioelectrical impedance or the resistance component value of the bioelectrical impedance which is a parameter associated with a bioelectrical impedance at higher and lower frequencies than a measuring frequency for the parameter associated with the bioelectrical impedance to be corrected or either one of which is the parameter associated with the bioelectrical impedance to be corrected.

$$\alpha = P_{\text{low}}/(P_{\text{low}}-P_{\text{high}})$$

wherein P_{high} is a parameter associated with a bioelectrical impedance at a higher frequency, and P_{low} is a parameter associated with a bioelectrical impedance at a lower frequency.

11. (Withdrawn) The method of claim 5, wherein the parameter α associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is expressed as follows by use of the absolute value of the bioelectrical impedance or the resistance component value of the bioelectrical impedance which is a parameter associated with a bioelectrical impedance at higher and lower frequencies than a measuring frequency for the parameter associated with the bioelectrical impedance to be corrected or either one of which is the parameter associated with the bioelectrical impedance to be corrected.

$$\alpha = P_{\text{high}} / (P_{\text{low}} - P_{\text{high}})$$

wherein P_{high} is a parameter associated with a bioelectrical impedance at a higher frequency, and P_{low} is a parameter associated with a bioelectrical impedance at a lower frequency.

12. (Withdrawn) The method of claim 5, wherein the parameter α associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is expressed as follows by a bioelectrical impedance value R₀ at a frequency of 0 Hz and a bioelectrical impedance value R_{inf} at an infinite frequency which are determined from bioelectrical impedance values measured at a number of frequencies.

$$\alpha = R_{\text{inf}} / R_0$$

13. (Withdrawn) The method of claim 5, wherein the parameter α associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is expressed as follows by use of an intracellular fluid resistance value R_i and an extracellular fluid resistance value R_e which are calculated based on a bioelectrical impedance value R_0 at a frequency of 0 Hz and a bioelectrical impedance value R_{inf} at an infinite frequency which are determined from bioelectrical impedance values measured at a number of frequencies.

$$\alpha = R_i/R_e$$

14. (Original) A body composition measuring apparatus comprising:

- an electric current applying unit,
- a voltage measuring unit,
- a bioelectrical impedance computing unit,
- a correcting unit, and
- a body composition computing unit,

wherein

- the electric current applying unit applies an electric current to a living body,
- the voltage measuring unit measures a voltage,
- the bioelectrical impedance computing unit computes a parameter associated with a bioelectrical impedance of a measured body part from the applied electric current and the measured voltage,
- the correcting unit corrects the parameter value associated with the measured bioelectrical impedance by use of a parameter representing an intracellular/extracellular fluid

ratio which is included in the parameter value of the bioelectrical impedance measured at a given frequency, and

the body composition computing unit computes an index associated with a body composition based on the corrected parameter value associated with the bioelectrical impedance.

15. (Original) The apparatus of claim 14, wherein the given frequency is the frequency of the electric current applied to the living body for estimation of the body composition.

16. (Original) The apparatus of claim 14, wherein the given frequency is a frequency different from the frequency of the electric current applied to the living body for estimation of the body composition.

17. (Original) The apparatus of claim 14, wherein the parameter of the bioelectrical impedance which is corrected by the correcting unit is any of the absolute value of the bioelectrical impedance, a bioelectrical impedance vector value or the resistance component value of the bioelectrical impedance vector.

18. (Currently Amended) The apparatus of claim 14, wherein ~~when~~ the parameter associated with the bioelectrical impedance which has been corrected by the parameter associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is P', and the correcting unit is for correcting the correction of the parameter associated with the bioelectrical impedance ~~in the correcting unit is made~~ in accordance with the following correction expression:

$$P' = f(P, \alpha) = K \cdot P^A \cdot \alpha^B + C$$

wherein $f(P, \alpha)$ is a correction function represented by parameters P and α , P' is the

corrected parameter associated with the bioelectrical impedance, P is the measured parameter associated with the bioelectrical impedance, α is the parameter associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio, and A, B, C and K are constants.

19. (Currently Amended) The apparatus of claim 18, wherein the parameter α associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is expressed as follows by use of a phase difference ϕ between the waveform of the alternating current applied from the electric current applying means to the living body and the waveform of the voltage measured by the voltage measuring means at the time of measurement of the bioelectrical impedance: [[.]]

$$\alpha = 1/\phi.$$

20. (Withdrawn) The apparatus of claim 18, wherein the parameter α associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is expressed as follows by use of a phase difference ϕ between the waveform of the alternating current applied from the electric current applying means to the living body and the waveform of the voltage measured by the voltage measuring means at the time of measurement of the bioelectrical impedance.

$$\alpha = 1/\tan(\phi)$$

21. (Withdrawn) The apparatus of claim 18, wherein the parameter α associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is expressed as follows by use of a parameter included in the parameter associated with the

bioelectrical impedance to be corrected or a parameter associated with a bioelectrical impedance which is measured at other frequency.

$$\alpha = R/X$$

wherein R is the resistance component of the bioelectrical impedance, and X is the reactance component of the bioelectrical impedance.

22. (Withdrawn) The apparatus of claim 18, wherein the parameter α associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is expressed as follows by use of the absolute value of the bioelectrical impedance or the resistance component value of the bioelectrical impedance which is a parameter associated with a bioelectrical impedance at higher and lower frequencies than a measuring frequency for the parameter associated with the bioelectrical impedance to be corrected or either one of which is the parameter associated with the bioelectrical impedance to be corrected.

$$\alpha = P_{\text{high}}/P_{\text{low}}$$

wherein P_{high} is a parameter associated with a bioelectrical impedance at a higher frequency, and P_{low} is a parameter associated with a bioelectrical impedance at a lower frequency.

23. (Withdrawn) The apparatus of claim 18, wherein the parameter α associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is expressed as follows by use of the absolute value of the bioelectrical impedance or the resistance component value of the bioelectrical impedance which is a parameter associated with a bioelectrical impedance at higher and lower frequencies than a measuring frequency for the

parameter associated with the bioelectrical impedance to be corrected or either one of which is the parameter associated with the bioelectrical impedance to be corrected.

$$\alpha = P_{\text{low}} / (P_{\text{low}} - P_{\text{high}})$$

wherein P_{high} is a parameter associated with a bioelectrical impedance at a higher frequency, and P_{low} is a parameter associated with a bioelectrical impedance at a lower frequency.

24. (Withdrawn) The apparatus of claim 18, wherein the parameter α associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is expressed as follows by use of the absolute value of the bioelectrical impedance or the resistance component value of the bioelectrical impedance which is a parameter associated with a bioelectrical impedance at higher and lower frequencies than a measuring frequency for the parameter associated with the bioelectrical impedance to be corrected or either one of which is the parameter associated with the bioelectrical impedance to be corrected.

$$\alpha = P_{\text{high}} / (P_{\text{low}} - P_{\text{high}})$$

wherein P_{high} is a parameter associated with a bioelectrical impedance at a higher frequency, and P_{low} is a parameter associated with a bioelectrical impedance at a lower frequency.

25. (Withdrawn) The apparatus of claim 18, wherein the parameter α associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is expressed as follows by a bioelectrical impedance value R_0 at a frequency of 0 Hz and a bioelectrical impedance value R_{inf} at an infinite frequency which are determined from bioelectrical impedance values measured at a number of frequencies.

$$\alpha = R_{\text{inf}} / R_0$$

26. (Withdrawn) The apparatus of claim 18, wherein the parameter α associated with the bioelectrical impedance which represents the intracellular/extracellular fluid ratio is expressed as follows by use of an intracellular fluid resistance value R_i and an extracellular fluid resistance value R_e which are calculated based on a bioelectrical impedance value R_0 at a frequency of 0 Hz and a bioelectrical impedance value R_{inf} at an infinite frequency which are determined from bioelectrical impedance values measured at a number of frequencies.

$$\alpha = R_i/R_e$$